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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,392	10/01/2003	Martin H. Graham	3921P007	9543

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EXAMINER
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KITOV, ZEEV

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/677,392

**Applicant(s)**

GRAHAM, MARTIN H.

**Examiner**

Zeev Kitov

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 3 - 6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3 - 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Examiner acknowledges a submission of the amendment and arguments filed on June 10, 2005. Claim 1 is amended. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4 - 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (US 6,424,125) in view of Mura (US 4,216,756). Regarding Claim 1, Graham discloses most of the structural limitations of the claim including a capacitor (element 10 in Fig. 1) attenuating signals having a frequency higher than the fundamental frequency when connected to the AC power signal; a control device (element 14 in Fig. 1) having a gate and two terminals, the two terminals being coupled to the capacitor; and a resistor (elements 11 in Fig. 1) coupled between the gate and one of the terminals of the control device causing the control device to conduct in the presence of unusually high voltage. Graham further discloses the control signal being normally off when the capacitor is connected to the AC power signal (col. 1, lines 40 –

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52) and a control circuit (element 13 in Fig. 1) sensing a high potential on the capacitor when the capacitor is disconnected; the control circuit is coupled to the control electrode of the control device (gate of the triac) causing the control device to conduct to dissipate the high potential (col. 2, line 57 – col. 3, line 12). However, it does not disclose a varistor. Mura discloses the varistor (elements 50b in Fig. 2) coupled between one of the two terminals (terminal 52b in Fig. 2) and the control electrode (gate) of the control device causing the control device to conduct in the presence of unusually high voltage (col. 6, lines 10 – 53). Both references have the same problem solving area, namely applying the thyristors for elimination of too high voltage across capacitor (col. 6, lines 54 – 56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Graham solution by adding the varistor according to Mura because as Mura states (col. 4, lines 17 – 27), the varistor is used to protect the triac against large amplitude transient line voltages (col. 7, lines 4 – 22).

Regarding Claim 4 Graham discloses the control device as TRIAC (element 14 in Fig. 1).

Regarding Claim 5, Mura discloses the two terminals of the control device as an anode terminal and cathode terminal (see Fig. 2), and the varistor (element 50b in Fig. 2) being coupled between the control electrode (gate) and the anode (node 52b in Fig. 2). A motivation for modification of the primary reference is the same as above.

Regarding Claim 6, Graham discloses a resistor (element 16 in Fig. 1) coupled in series with the control device (element 14 in Fig. 1).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graham in view of in view of Mura and Court Decision *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). As was stated above, Graham and Mura disclose all the elements of Claims 1. However, regarding Claim 3, they do not disclose the varistor with cross-bar characteristics. As to particular characteristics of the Claim 3, the varistor ("cross-bar varistor"), the Specification does not disclose them only saying that: "once triggered the varistor places essentially, a short across the power source" (page 2, paragraph 007). As well known in the art, to fire the TRIAC, the current is to be delivered to the TRIAC's gate, i.e. relatively low resistance is to be placed between the supply voltage source and the TRIAC gate. Therefore, a value of the resistance of the active varistor can affect the result (firing of TRIAC) and represents a result effective variable. Court Decision addresses finding a value of the result effective variable by stating that discovering an optimum value of a result effective variable involves only routine skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Shilling et al. solution by selecting the varistor with certain active characteristics ("cross-bar varistor"), because as it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

***Response to Arguments***

Applicant's Arguments have been given careful consideration but they are moot in view of new ground of rejections.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose current telephone number is (571) 272 - 2052. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can

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be reached on (571) 272 – 2800, Ext. 36. The fax phone number for organization where this application or proceedings is assigned is (703) 872-9306 for all communications.

Z.K.

02/11/2005



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